

REMARKS

With the present response, Applicants amend claims 1, 5, 6, 7, 9-11, and 13 and to add claims 15-40. Consequently, claims 1-40 are pending. New claims 15-37 are supported by, e.g., the originally filed claims, pages 4-9 of Applicants' specification, and FIG. 1 of Applicants' specification. Applicants have also amended the specification to correct a typographical error. Claim 9 has been amended to correct a grammatical error, and such amendment was not made for patentability purposes. Claims 6 and 7 were amended for clarification and not patentability purposes. Claims 5, 10, 11, and 13 have been amended to remove their respective preambles, and such amendment was not made for patentability purposes.

In the outstanding Office Action, the Examiner (1) objected to claim 11; (2) rejected claims 5-9, 11, and 12; (3) rejected claims 1-4 under 35 U.S.C. §101; (4) rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by Lindskog et al., U.S. Patent No. 6,622,251; (5) rejected claims 5-13 under 35 U.S.C. §102(e) as being anticipated by Ho et al., U.S. Publication No. 2003/0128683; and (6) rejected claims 2-4 under 35 U.S.C. §103(a) as being obvious over Lindskog.

With regard to the objection in (1), the Examiner objected to "a reverse acknowledgement channel" in line 18 of claim 11 as seemingly referring back to "a reverse acknowledgement channel" in line 7 of claim 11 and recommended that the "a reverse acknowledgement channel" in line 18 be amended to --the reverse acknowledgement channel-- to provide antecedent basis for the text in line 18. Applicants have removed "sending an acknowledgement on a reverse acknowledgement channel by the mobile station" on lines 7 and 8. Consequently, the text of "a reverse acknowledgement channel" in line 18 of independent claim 11 does not need to be changed and Applicants request the objection to independent claim 11 be withdrawn.

With regard to the rejection in (2) of claims 5-9, the Examiner rejected claims 5-9 and 11 under 35 U.S.C. §112, second paragraph. Regarding claims 5-9, the Examiner

asserted that “the transition” in “claim 5, line 4” is unclear. Applicants believe the Examiner means “claim 6, line 4.” Applicants have amended a portion of claim 6 from “detecting the transition by the base station” to --detecting by the base station the transition by the mobile station from the active state to the Control Hold Mode-- (emphasis added).

Concerning claim 11, the Examiner asserted that there was a missing step before “sending an acknowledgement on a reverse acknowledgement channel by the mobile station”. Applicants have removed the text of “sending an acknowledgement on a reverse acknowledgement channel by the mobile station” in independent claim 11 (e.g., as sending an acknowledgement is optional -- see page 8, lines 17-19 of Applicants’ specification).

Claims 6 and 11 as now clarified by amendment, should be found to be free of rejection under 35 U.S.C. §112, second paragraph. These amendments are deemed to be cosmetic in nature, and thus was not made for a reason related to patentability, as the Examiner could have simply objected to these claims, and not rejected them under 35 U.S.C. §112, second paragraph. In any event, this amendment should not be construed to impair in any way the application of the full range of equivalents for the claimed subject matter.

Regarding the rejections in (3) above, the Examiner rejected claims 1-4 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Specifically, the Examiner asserted that claims 1-4 are directed to software, which lacks a tangible embodiment. Applicants have amended claim 1 to recite in part --A medium access control identification code (MAC_ID) embodied in a network device-- (emphasis added), as shown in FIG. 1 and described at page 2, lines 11-21 and page 3, line 15 to page 5, line 11 of Applicants’ specification. Consequently, claim 1 as now clarified by amendment, should be found to be free of rejection under 35 U.S.C. §101.

With regard to the rejections in (4) above, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by Linskog et al., U.S. Patent No. 6,622,251. The Applicants have clarified by amendment independent claim 1 to recite that the MAC_ID *is assigned to* each of a first group of the plurality of mobile stations *in an ascending order*

from the MAC_ID space, and wherein the MAC_ID *is assigned to* each of a second group of the plurality of mobile stations *in a descending order* from the MAC_ID space.

Thus, in the disclosed invention, MAC_IDs are *assigned* to mobile stations in ascending or descending order. One exemplary benefit of this assignment was stated by Applicants as follows: “This method of assignment reduces the gaps whenever the R-PDCH users are addressed by a bitmap field.” Page 5, lines 2-3 of Applicant’s specification. By contrast, Applicants read Linskog as making use of *already assigned* MAC_IDs. The system of Linskog does not disclose MAC_ID *assignment*.

Consequently, Applicants respectfully submit that independent claim 1 as amended is patentable over Linskog and request the §102(e) rejection to independent claim 1 be withdrawn. It should also be noted that newly added claim 37 depends from amended independent claim 1 and is also patentable for at least the reasons given with respect to independent claim 1.

It should be noted that independent claims 15, 19, 23, and 38 track the language of independent claim 1 and therefore are also patentable over Linskog, as are their respective dependent claims 16-18, 20-22, 24-26, and 39-40.

With regard to the rejections in (5) above, the Examiner rejected claims 5-13 under 35 U.S.C. §102(e) as being anticipated by Ho. Applicants respectfully disagree. Applicants have amended independent claims 5, 10, 11, and 13 to more particularly point out that a reverse link packet data channel is being used by a mobile station to transmit to an apparatus such as a base station. More specifically, claim 5 recites in part “the mobile station starting to transmit on *the reverse link packet data channel* in autonomous mode”; claims 10 and 13 recite in part “wherein the mobile station transmits on *the reverse link packet data channel* in the active state”; and claim 11 recites in part “the mobile station starting to transmit autonomous rate on *the reverse link packet data channel*”. Additionally, independent claims 5, 10, 11, and 13 have been amended to recite that the methods involve a transition from a Control Hold Mode *of a reverse link packet data channel*. Thus,

independent claims 5, 10, 11, and 13 are directed to Control Hold Modes for a reverse link packet data channel.

In contradistinction, Ho appears to be directed to a Control Hold Mode for a forward link and not for a reverse link packet data channel. In other words, Ho places the forward link in a Control Hold Mode, *and because the forward link is in a Control Hold Mode*, the load on the reverse link will be smaller or can be turned off. For instance, Ho states that “[s]ince the forward packet data channels and their associated control channels are not monitored, the operations of the reverse channels can be gated off to predetermined duty cycles, or set on intermittent transmission modes, or shut down completely.” Abstract of Ho. See also, paragraph 0007 at bottom two sentences. While Ho does state that “[t]he improved Control-Hold Mode is a state that a remote station can enter so that the remote station can cease monitoring various forward link channels and cease transmitting on various reverse link channels” (paragraph 0030 of Ho), Ho is not directed to a Control Hold Mode for a reverse link packet data channel. For instance, Ho never discusses a reverse link packet data channel or implies the same. For instance, Ho states the following:

Some of the channels of the reverse link can include, but are not limited to a pilot channel, power control channel, assignment channel, control channel, dedicated control channel, medium access control (MAC) channel, fundamental channel, supplemental channel, acknowledgment channel, and a channel quality indicator channel.

Paragraph 0026 of Ho. There is no mention in the cited text of Ho of a reverse link packet data channel or communication on the same, as recited in independent claims 5, 10, 11, and 13. In paragraph 0035 of Ho, Ho does state that “[t]he packet data channel (PDCH) is turned off”, but Ho makes it clear that the PDCH is a forward link PDCH. See Abstract of Ho (“Since the forward packet data channels . . . are not monitored”) and paragraph 0026 of Ho (where Ho includes a “packet data channel” as part of a forward link but does not include a packet data channel as part of a reverse link).

Consequently, because Ho does not discuss or imply reverse link packet data channels and Control Hold Modes for the reverse link packet data channels and further does

not disclose transmission on reverse link packet data channels, as recited in independent claims 5, 10, 11, and 13, independent claims 5, 10, 11, and 13 are patentable over Ho. Because independent claims 5 and 11 are patentable, their respective dependent claims 6-9 and 14 (dependent from claim 5) and 12 (dependent from claim 11) are also patentable for at least the reasons given with respect to claims 5 and 11.

It should be noted that newly added independent claims 27 and 32 also recite “transmitting on the reverse link packet data channel in autonomous mode”. Thus, independent claims 27 and 32 and their respective dependent claims 28-31 and 33-36 are also patentable over Ho for at least this reason.

Regarding the rejections in (6) above, the Examiner rejected claims 2-4 under 35 U.S.C. §103(a) as being obvious over Lindskog. The Examiner asserted that dividing mobile terminals into two groups based on forward and reverse links channels is a matter of design choice. Applicants respectfully disagree. As determined by Applicants and as stated in Applicants’ specification, “This method of assignment reduces the gaps whenever the R-PDCH users are addressed by a bitmap field.” Page 5, lines 2-3 of Applicants’ specification. Moreover, Applicants determined the following:

It is noted that if the MAC_ID is assigned randomly for the users with or without a R-PDCH assignment, some of the bits in the bitmap carried by the F-ACKCH can be wasted, for example, if these bits are used to signal the mobile units that do not transmit on R-PDCH (i.e. the mobile units do not need to receive ACK/NAK in the F-ACKCH from the base station 1). Accordingly, the teachings herein provide for the use of separate segments of the available MAC_IDs for R-PDCH users.

Page 4, lines 20-25 of Applicants’ specification. It was Applicants who determined that improvements could be had if the MAC_IDs were split into first and second groups of mobile stations using forward and reverse link channels. Thus, Applicants respectfully submit that it is not mere design choice for the recitations in dependent claims 2-3 and also that Lindskog does not disclose or imply this subject matter. Therefore, dependent claims 2-3 are patentable over Lindskog.

Further, dependent claim 4 recites “wherein the MAC_ID is assigned in at least one of a forward link allocation channel and a reverse link allocation channel for user traffic identification”. As stated in Applicants’ specification:

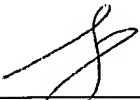
Also disclosed herein is an enhanced scheme for MAC_ID assignment, wherein the MAC_ID (Medium Access Control Identification Code) is used not only for the cdma2000 1xEV-DV forward link (e.g., F-PDCH in revision C), but also for the reverse link (e.g., R-PDCH in revision D) for user traffic identification. In other words, the teachings herein provide for a system where the base station assigns the MAC_ID to a mobile station whenever either direction of the 1xEV-DV high-speed packet data channels, F-PDCH or R-PDCH, is assigned.

Page 2, lines 11-16. The arguments given above with respect to dependent claims 2 and 3 are equally relevant to dependent claim 4, and thus dependent claim 4 is also patentable over Linskog.

Based on the foregoing arguments, it should be apparent that claims 1-40 are thus allowable over the reference(s) cited by the Examiner, and the Examiner is respectfully requested to reconsider and remove the rejections.

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